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EXECUTIVE SUMMARY

Borrower and Guarantor: The Federative Republic Of Brazil

Executing agency: Ministry of the Environment

Amount and source:			First Phase	Second Phase
	IDB: (OC)	US\$	82.5 million	117.5 million
	Local:	US\$	82.5 million	117.5 million
	Total:	US\$	165.0 million	235.0 million

Financial terms and conditions:	Amortization Period:	20	Years
	Grace Period:	4	Years
	Disbursement Period:	4	Years
	Interest Rate:	variable	
	Supervision and Inspection:	1.00	%
	Credit Fee:	0.75	%
	Currency:	Euro	

Objectives: The Goal of this Program is to foster sustainable development in the Upper Paraguay Basin with special emphasis on the Pantanal. The Purpose of this Program is to stabilize the environmental quality of the Pantanal's ecosystems by supporting reforms in the management and conservation of natural resources.

Multi-phase Program Loan The Program is designed as a Multi-Phase operation consistent with the five criteria set out in the Policy Document establishing Multi-Phase Program Loans, GN-2085:

- (i) It requires a sustained effort to make a difference in addressing pervasive environmental problems.
- (ii) It focuses on the sectoral framework for longer-term intervention.
- (iii) It is an effort to build ownership and sustainability through institutional change and regulatory frameworks.
- (iv) It provides the opportunity to adapt and update mid-stream within the overall agreed framework.
- (v) It puts emphasis on on developing sustainable institutions rather than ad hoc Project Implementation Units.

By 2010, a year after the end of the second phase, the Program should

have achieved the following measurable results. First, the water of the Cuiaba and Miranda Rivers that enters the Pantanal should attain Class II quality standards with special emphasis on the standards for dissolved oxygen and sediments, and there should be substantial improvement in the quality of the Taquari River. Second, the populations of the 10 principal species of commercial fish should be stable or increasing. Third, the amount of the watershed under designated protection should have increased to 2,000,000 ha (5% of the land area in the Upper Paraguay Basin) from 546,206 ha (1%) in 1999. Finally, sustainable activities should have increased, specifically aquaculture production in the Upper Paraguay Basin should have increased from 8,850 to 13,275 metric tons and the number of tourist visitors should have increased by 50% over the number registered as part of the Program's baseline indicators in 2001.

Description:

The Program has seven sub-programs

- 1. Administration of water resources** This sub-program monitors and regulates the use of water in the Cuiaba, Miranda and Taquari watersheds. It implements five projects to (i) monitor surface and ground water quality, (ii) implement an information system to manage surface and ground water, (iii) assign, regulate and charge for the right to use ground and surface water, (iv) implement a water management system that is decentralized to the watershed level, and (v) monitor hydrological flows and issue flood warnings.
- 2. Soil and pesticide management in critical sub-watersheds** This sub-program reduces the amount of silt and agrotoxics that enter critical sub-watersheds. The first phase addresses sub-watersheds in the Velmelho, San Lorenzo, Miranda and Taquari watersheds, all of which have critical erosion problems. The sub-program will finance the preparation and implementation of integrated micro-watershed management plans and pilot projects.
- 3. Protection and management of habitat, fish and wildlife** This sub-program preserves representative ecosystems and protects the Pantanal against destruction of natural vegetation, poaching and over-fishing. This sub-program comprises projects to (i) consolidate national parks and implement newly declared state parks; (ii) establish a biosphere reserve; (iii) implement protected fish reserves in spawning areas, (iv) equip and train public officers, volunteers, forest police and firefighters who enforce fishing regulations and control poaching and illegal fires, (v) studies for new parks that will be implemented in the second phase; and (vi) studies to determine mechanisms to pay for environmental services and to acquire control of land within parks without having to purchase it.
- 4. Sanitation** This sub-program improves the quality of rivers that are tributaries of the Pantanal. The sewerage works financed by the

Program include collection networks, interceptors, pumping stations and treatment plants. The program also finances works to reduce water losses and improve efficiency. The subprogram also finances preparation of a strategic plan for the integrated management of solid waste in the Upper Paraguay Basin and feasibility studies for the implementation of the plan in the second phase.

- 5. Support for sustainable economic activities.** This sub-program stimulates economic activities that do not adversely affect the environmental quality of the Pantanal. This program has three components: fish production and fisheries management, ecotourism, and sustainable agriculture.

Fish production and management has three activities: (i) research on the biology, genetics and pathologies of the ten main species of commercial fish; (ii) creation of a fish gene bank to be used for aquaculture and reintroduction of species in depleted areas; (iii) implementation of a statistical system for fisheries to improve the monitoring and administration of fisheries.

Tourism/ecotourism sub-program finances a master plan to develop ecotourism in the Upper Paraguay Basin. It includes: (i) a diagnosis of the facilities and services currently provided and a diagnosis of the institutions that support these services, (ii) a study of the Brazilian ecotourism market, (iii) an assessment of needs for training, (iv) a study of, and guide for, best practices in the provision of services, (v) an analysis of existing regulations for tourism services, recommendations for improvement and a reference guide on sources of finance for investors, (vi) a tourism information system, and (vii) plans for development of areas with tourism/ecotourism potential in the Basin.

Sustainable agriculture component finances: (i) a study of the potential for trade-marking and environmental certification of Pantanal products; (ii) compilation of existing technical information on improved pasture, herd management, marketing and sources of finance for business plans; and (iii) dissemination of the results of the studies; (iv) demonstration projects for the production of two species of wildlife; (v) a pilot project in feral pig management (private hunting and trapping); (vi) manuals on techniques to produce environmentally compatible alternative products and assistance to develop marketing chains and obtain credit.

- 6. Parkways and roads.** This sub-program guarantees all-year access to parks and attractions for ecotourism, provides evacuation routes for cattle during flood season, and facilitates protection of habitat by giving better access to firefighters and environmental enforcement agents. It finances the reconstruction of 106 kms of parkways and other roads.

7. Environmentally sustainable activities in indigenous areas This sub-program implements sustainable land use activities on indigenous lands. In MS, the program finances: (i) community organization to plan, execute and maintain projects, (ii) restoration of gallery forests and native vegetation along streams and rivers, (iii) planting of seeds and seedlings on native lands, and (iv) technical assistance for the reintroduction of traditional agricultural products and natural fertilizers to restore land productivity, and (v) the construction of fences and introduction of small scale capivara production for own consumption. In MT, it finances (i) community organization, (ii) training in economically sustainable practices, and (iii) identification of, and training in, culturally appropriate activities. Both state programs have an evaluation study that will recommend actions for the second phase.

**Trigger
indicators for
second phase**

Seven achievements in the first phase are necessary to make progress toward the objectives of (i) Class II water quality, (ii) increasing fish population, (iii) increased protected area and (iv) increased sustainable activities. These achievements are the target indicators for considering the second phase of the program. They are:

- (i) A register of all users who extract water from ground and surface sources and who discharge waste in water bodies.
- (ii) The States of MS and MT send out the first bills for the right to use water in the Cuiaba, Miranda, and Taquari basins and establish the price structure for volumes extracted or discharged.
- (iii) New fish legislation (or regulations), based on Program research, has been approved and is being enforced.
- (iv) 20% of the land in the state parks of the Program is owned by the states and that an additional 20% of the land in federal protected areas of the Program is owned by the federal government.
- (v) Campgrounds, fishing lodges, and fazendas with guest lodgings in the Pantanal are licensed and inspected at random at least once a year, and tourist guides in the Pantanal are trained and licensed.
- (vi) All studies for projects for the second stage are presented to the civil society members of "State Committees" and have objections noted in writing for the consideration by the governmental authorities and the future project team.
- (vii) Cost recovery mechanisms generate cash flow to support maintenance of rural roads, operating costs for firefighters, and operation of federal and state protected areas.

**Bank's country
and sector
strategy:**

The strategy of the Bank in Brazil emphasizes: (i) reform and modernization of the public sector at the federal and state levels; (ii) improved competitiveness by supporting the financial system, small and medium sized enterprises, rehabilitation of basic infrastructure, tourism development, and regional integration; (iii) reduction of social inequality and poverty, giving priority to education and health and seeking out associations with the community and civil society; and (iv) attending problems of management of the environment and natural resources.

The proposed program is consistent with the Bank's strategy. It supports reform and modernization of the public sector at the federal level (MMA, IBAMA) and the state level (i) by improving and enforcing environmental laws and regulations, and (ii) by promoting more effective use of public resources in the protection and provision of public goods. The program includes rehabilitation of basic infrastructure to support sustainable economic development, especially ecotourism. The program invests directly to protect critical natural habitats, recover degraded areas, and improve environmental management.

**Environmental/
social review:**

The CESI, in its review of the Profile II of the program, found that the Program was not likely to have major negative environmental impacts and did not require an Environmental Impact Assessment (EIA). It did ask for a general environmental and social analysis of the Program, to be submitted to the CESI in the form of an ESIR. An EIA/RIMA was performed for the proposed Transpantaneira parkway MT-060, because of its potential negative environmental impacts. The EIA was made available to the public on March 20, 2000. A public hearing was announced on June 14, 2000, and held on August 9, 2000. The draft ESIR in Portuguese covering the entire program was made available to the MMA for distribution on August 14, 2000. The CESI reviewed and approved the ESIR on September 29, 2000.

Direct adverse environmental impacts from the Program will be temporary and minimal. The impacts are easily mitigated using known construction control techniques and by proper siting of borrow pits and loading facilities.

Long-term adverse environmental impacts are possible because of increased ecotourism in the area. However, these impacts are even more likely without the Program. The Program will help develop ecotourism at an appropriate scale with appropriate safeguards (municipal norms and procedures and training). Management planning for protected areas and parkways will determine environmental carrying capacities and establish limits on visitors and activities. Implementation of management plans for parkways will ensure that zoning and land use restrictions control possible adverse impacts from development along improved roads.

The Program is designed to have positive gender impacts. Gender considerations have been included in three sub-programs. In the soil and pesticide management there will be meetings to brief women on actions to be taken to get their participation and support. In urban sanitation, there will be briefings on hygiene and water conservation for women in households that get new connections. In the indigenous areas sub-program, women will receive training, consistent with indigenous values, in handicraft production, marketing, and managing small-scale tourism activities. Anthropological and technical support will be available.

Benefits:

The Program will produce benefits over the long term. Expected social benefits include improved quality of life from the provision of basic water and sanitation services. Health risks will be reduced directly by decreasing the level of agrotoxic chemicals in the water. Early warning will reduce the risk of loss or damage from floods. An indirect social benefit over the long term will be the presence of a watershed authority that ensures rational use of water resources, protection of groundwater and resolution of conflicts. Economic benefits include increased income for producers in the upper basin and in the Pantanal floodplain, reduced road user costs and increased tourism benefits. Indirect benefits will occur, especially over the long term, including increased income and employment generated from a more diversified economic base.

It is possible to identify direct beneficiaries for the soil and pesticide management and the urban sanitation sub-programs. The soil and pesticide management sub-program will directly benefit 11,800 producers in MS and 7,800 in MT. Forty eight percent of the beneficiary households in MT are low income (less than 3 minimum salaries). No data were available to calculate the percentage of beneficiary households in MS that are low income. In addition, the sanitation sub-program will benefit 304,805 people in the 10 municipalities where water and sewage investments will be made. The majority (72% to 89%) of beneficiaries of the proposed water and sewage projects are low income. The indigenous action plan will benefit 22,900 indigenous people in the two states. There are a number of direct beneficiaries from investments in parkways, was not estimated.

Risks:

There are a number of risks associated with this Program. The executor and the sub-executors have little experience with this type of Program. The state institutions are weak and there have been significant delays in the execution of World Bank projects. The Program addresses these risks by financing the hiring of a firm specialized in financial administration to assist the executors and participating institutions. In addition, the Program includes training for the staff of the executing units.

The states are in weak financial condition. They have improved their budget indicators by selling assets and making significant cuts in their

operating and capital budgets. These cuts cannot continue and, in fact, the Program implies increased operating and maintenance costs. The Program addresses this risk by emphasizing the consolidation of existing activities (parks, forest police, firemen) in the first stage in order not to increase personnel costs significantly. It leaves expansions for the second phase. In addition, the Program emphasizes financial mechanisms that have beneficiaries contribute to the cost of operation and maintenance (water use charges, tolls for road use, use fees for parks, beneficiary contributions for rural road maintenance and operating cost of fire departments). The Program provides an incentive for the States to budget funds for adequate maintenance by making continuation to the second phase dependent on success in the first phase.

A third risk is possibility that in a complex program, the executors can lose focus on priorities. The Program addresses this risk contractually by requiring that environmental activities be started before infrastructure works can be put out to bid. In addition, the first year review will keep the Program on target.

A fourth risk is that the mechanisms set up to foster public participation may not work effectively. There already have been disputes among groups that want to be represented on committees. Members may not have the sustained interest to work out and agree on the operating rules. The Governments may ignore recommendations. To manage these risks, the Bank hired consultants to help civil society organize public meetings that established a preliminary structure for participation. The Program design includes information systems available to the public and provides US\$600,000 to support civil society participants. The Bank will follow the participation process closely. It has already offered the help of facilitators to assist the organization process. It will send a mission to evaluate progress in the establishing of the Operating regulations three months after the approval of the operation. It will monitor the information provided to civil society to make sure it is complete. Each program review will explicitly evaluate the problems and successes with the participation process.

**Special
contractual
clauses:**

Prior to first disbursement, the Borrower must:

- ?? Establish the Program's Executing Unit and staff it with appropriate personnel(¶3.11) and establish Sub-Executing Units in IBAMA and the States of MS and MT and staff them with appropriate personnel.¶3.16
- ?? Submit the bidding documents and procedures for contracting the management firm for the approval by the Bank. (¶3.17)
- ?? Submit execution agreements (prepared in accordance with a draft previously approved by the Bank) with the executing and

participating entities.¶3.1

?? Submit evidence that civil society participation Committees have been constituted and assigned attributions and responsibilities.¶3.61

?? Put in effect the Operating Regulations for the soil and pesticide management program.¶3.27

Other special clauses

?? Prior to initiating the contracting of any goods, services, works or studies, the Borrower must have contracted a management firm. ¶3.17

?? Within 3 months of first disbursement, the borrower should provide evidence that the State Committees have had their first meeting. ¶3.61

?? Within eight months of the signature of the Contract, FEMA-MT and FEMA-P must assign the necessary people to supervise the Water Resource Administration sub-program. ¶3.25

?? Prior to the publication of the bidding documents for the acquisition of equipment for the Forest Police in MT and MS respectively, the Borrower must submit evidence that MT and MS have assigned an adequate number of additional officers in the area where the equipment will be used.¶3.33

?? Prior to the publication of bidding documents for the construction of a fire station in a municipality, the Borrower must provide evidence that the municipality has signed an agreement with the Firefighter Corps to pay for energy, water and utility costs, the operation and maintenance of equipment, and part of the replacement cost of light equipment directly used to combat fire. Prior to the publication of bidding documents to equip a new station the borrower must provide evidence that the State of MS has assigned 60 firefighters for each of the two new fire stations. ¶3.34

?? Prior to the disbursement of funds to execute the sanitation sub-program in the state of MT, the borrower must submit (i) an agreement with the Municipality of Cuiaba on the responsibilities of both parties in the institutional strengthening of the agency, (ii) evidence that the water company of Cuiaba's Municipality has been formed, and (iii) a copy contract with a private firm to help administer the company. ¶3.38

?? Prior to publication of bidding documents in sanitation in MS, submit evidence of (i) an agreement with SANESUL; and (ii) plan to improve the operating efficiency of SANESUL.¶3.36

?? Prior to the publication of bidding documents (i) for infrastructure projects requiring environmental licenses, submit evidence that the environmental review and license process has been completed; (ii) for the first road in the states of MT and MS, submit an agreement with DVOP and DERSUL on the responsibility of the parties in the execution of parkway and roads; and (iii) for parkways and the Bonito-Bodequena road, submit the corresponding environmental management plan to be included in the bidding documents. ¶3.70 and ¶3.46

?? Prior to awarding contracts to finance any infrastructure work, contract a firm to do the supervision of construction and compliance with environmental requirements. ¶3.70

Poverty-targeting and social sector classification:

This operation does not qualify as social equity enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (Document AB-1704). Furthermore, this operation does not qualify as Poverty Targeted Investment (PTI).

Exceptions to Bank policy:

No exceptions to Bank Policy are recommended.

Procurement:

Procurement of civil works, goods and services, and hiring of consulting services will be subject to the Bidding Procedures specified in Annex B and Annex C of the Loan Contract. When the estimated value of civil works is the equivalent of five million dollars (US\$ 5,000,000) or greater, and when the estimated value of goods and services is the equivalent of three hundred fifty thousand dollars (US\$350,000) or greater, the civil works or goods and services will be subject to international competitive bidding as specified in Annex B. All consulting contracts with amounts equivalent to two hundred thousand dollars (US\$200,000) will be subject to international competitive bidding. The procurement plan is attached in Annex III-1.